

# Travis Zhang

480-434-8095 | tz98@cornell.edu

<https://zhangtravis.github.io/> | <https://github.com/zhangtravis> | <http://linkedin.com/in/travis-zhang>

## Education

### Cornell University, College of Engineering

Ithaca, New York

*Bachelor of Science in Computer Science* | GPA: 3.931 | Dean's List (Fall 2020)

Sep 2020 – May 2024

- **Relevant Courses:** Intro to ML, OOP and Data Structures, Functional Programming and Data Structures\*, Intro to Backend Development\*, Discrete Structures, Linear Algebra\*, Multivariable Calculus, Differential Equations\*, Computing Tech in Smartphones\*

### Hamilton High School

Chandler, Arizona

GPA: 4.927/5.0

July 2016 – May 2020

- **Honors:** Steve Sanghi Scholarship Award, Andy Grove Intel Scholarship, National Honor Society Semifinalist Scholarship

\*: Current courses

## Experience

### ASU Robust Machine Learning Group

Tempe, Arizona

*Student Researcher*

April 2019 – Present

- Applied transformation-invariant constraints on adversarial training using Tensorflow to improve robustness of Convolutional Neural Network (CNN)
- Implemented 3 algorithms to reduce time for loss to converge for proposed methodology (up to 60% reduction)
- Designed physical attack to fool Deep Reinforcement Learning (RL) Agent using Pytorch

### ASU Signal, Information, Networks, and Energy Laboratory

Tempe, Arizona

*Student Researcher*

Sep 2017 – April 2018

- Created program to temporally and spatially interpolate power outputs of solar panels using Scikit-learn, Pandas, and Numpy
- Analyzed patterns in cloud coverage and temperature to account for fluctuations in power output

## Activities

### Cornell Data Science Project Team

Ithaca, New York

*Intelligent Systems Subteam*

Feb 2020 – Present

- Developed multiple RL agents (perfect and imperfect information) to play No Limit Texas Hold Em
- Attended weekly meetings for project updates & gave paper presentations to team

### Associate of Computer Science Undergraduates

Ithaca, New York

*Academic Officer*

Oct 2020 – Present

- Helped organize and host academic events including research night and student-faculty luncheon

### Hamilton Robotics Team 🤖

Chandler, Arizona

*Head of Electrical, Head of Communications*

Aug 2016 – May 2020

- Designed robot using Solidworks and used CNC router and mill to build precise parts
- Programmed autonomous, teleoperated, and vision code for robot using Java and FRC WPI Library

### Mathworks Math Modeling Challenge 🏆

Chandler, Arizona

*Team Leader*

Jan 2019 – Feb 2020

- Wrote a 15+ page research paper about mathematical models the team designed + implemented using Python

## Personal Projects

### GeoPenguin 🐧

Aug 2020 – Sep 2020

- Designed iOS app using SwiftUI that reminded students to bring both COVID-related and personal items
- Implemented Geofencing technologies to encourage social distancing and track when to send out reminders

### National Honor Society App 📱

July 2019 – Jan 2020

- Developed both iOS (Swift) and Android (Java) mobile application
- Created personalized login system using student IDs and incorporated Google Firebase to send and retrieve information on app

### CUSD Equity Symposium App 📱

Nov 2018 – May 2020

- Produced iOS app for the Chandler school district's annual equity symposium
- Integrated Google Firebase to build a login system and to store symposium information in a database

### Skin Cancer Diagnosis using Neural Networks

Aug 2018 – April 2019

- Built CNNs and Generative Adversarial Networks in Keras + Tensorflow to improve computer diagnosis of skin cancer

## Skills and Interests

**Skills:** Java, Python, Swift, C++, Keras, Pytorch, Tensorflow, Numpy, Pandas, Git/Github, HTML, CSS, LaTeX, Scikit-learn, Firebase

**Miscellaneous Skills:** Photoshop, Autodesk Inventor, Solidworks CAD, Welding, CNC Machine, Soldering, Milling

**Interests:** Photography, Tennis, Snowboarding, Adversarial Attacks in Machine Learning, Robotics, Airplanes